



## **ABSTRACT**

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The present invention provides variants of precursor phenol oxidizing enzymes. The precursor enzymes can be, for example, naturally-occurring or recombinant phenol oxidizing enzymes. The variant enzymes, in general, are obtained by modification of a precursor DNA sequence encoding the naturally-occurring or recombinant phenol oxidizing enzyme to generate the substitution of one or more amino acids in the encoded amino acid sequence. Variant enzymes are disclosed having properties which differ from those of their respective precursor enzymes, e.g., altered pH optima and/or phenol oxidizing activity and/or altered stability. The variant enzymes of the present invention are especially useful in detergent formulations, for example, to modify (bleach) the color associated with colored compounds.

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